IV Table Maintenance Coding Procedures

To provide flexibility in meeting the needs of agencies, CALSTARS is designed as a "table-driven" system. This means that the specific accounting structure and processing logic for each agency is controlled through tables. CALSTARS responds to new and changing information requirements through the maintenance of these tables. Detailed discussions of most of the CALSTARS tables, procedures for preparing table maintenance transactions, and procedures for entering the table maintenance transactions into the Table Maintenance Inquiry screens are contained in this chapter. In addition, there are five tables related to the Labor Distribution Subsystem that are discussed in Volume 2, Chapter VI. The tables discussed in this chapter and the tables related to the Labor Distribution Subsystem are maintained by each agency.

There are also Statewide Tables that are maintained by CALSTARS staff. These include the Transaction Decision Table which is described in Volume 5, the Error Code Table which is described in Volume 4 and certain Descriptor Tables that are included in this chapter.

Table maintenance transactions can be entered through the online screens as described in this chapter or through external transactions. External transactions are created outside of CALSTARS, typically using spreadsheet or database software on a personal computer, and are electronically uploaded to CALSTARS in the prescribed format. To learn more about processing external transactions, please call (916) 445-0211, extension 2811, and ask for the System Support Unit Manager.

The tables contained in this chapter are:

✪ Appropriation Symbol (AS) Table -- contains descriptive data for each appropriation available to an agency and indicators that define the type and level of appropriation control.

✪ Budget Sequence (BS) Table – contains data elements and codes used to control the posting and sequencing of budgetary financial transactions in CALSTARS.

✪ Cost Allocation (CA) Table -- contains data elements and codes used to control the Cost Allocation subsystem.

✪ Descriptor (DT) Tables -- contains descriptive information for all codes such as program, element, component, task, and agency object.

✪ Index Code (IC) Table -- contains the descriptive data that identifies an agency's internal organizational structure.

✪ Organization Control (OC) Table -- contains organizational classification data and indicators that enable the structure of CALSTARS to be tailored to meet each agency's requirements.

✪ Program Cost Account (PA) Table -- contains descriptive data that identifies an agency's program structure and funding sources.

✪ Project Control (PC) Table -- contains descriptive data and control information for each project, contract or Federal grant. The Project Control Table is based on inception-to-date rather than State fiscal year. Control data includes beginning and end dates and several posting and control level indicators.

✪ Vendor Edit (VE) Table -- contains name, address and tax identification number for vendors who do business with the agency. Also, it contains employee records for those who may receive payments (other than payroll) from an agency. Vendor numbers are unique to each agency.

The coding requirements and data entry procedures necessary to add, change, or delete table entries and how to perform other table functions in CALSTARS are also covered in this chapter.

TABLE MAINTENANCE ACTIVITY LOG

A control log should be kept for all table maintenance activity. The Table Maintenance Log, CALSTARS 20, is shown in Exhibit IV-1. The various Table Maintenance Activity reports shown throughout this chapter must be reconciled to the Table Maintenance Log to ensure that each table was properly updated.

Table maintenance records are as important as financial records. The Table Maintenance logs and transaction activity reports should be kept as long as the financial records they control.

TABLE PROCESSING

With the exception of the Budget Sequence Table, the CALSTARS tables described in this chapter are all processed in the same way. There are two sequences: first, the tables are edited and updated daily in the same order; second, the functions within each table are always processed in the same order. These two processing sequences are described below.

EXHIBIT IV-1

CALSTARS 20   **STATE OF CALIFORNIA**

TABLE MAINTENANCE LOG

TABLE_____   PAGE_____

DATE	NO. OF TRANSACTIONS	PREPARED BY	COMMENTS	VERIFIED BY	DATE	COMMENTS

Table Processing Sequence

Most of the tables are interrelated. The data contained in one table is edited against another table for validity. Therefore, it is important that all of the data elements required for a specific table are previously established. This does not mean that a full processing cycle must elapse between each table entry.

As many different tables as desired may be loaded during a single processing cycle so long as all the interrelated data is present. However, if an error is made on one table entry, all subsequent table maintenance dependent on that table entry will also be in error.   CALSTARS tables were given 2-letter codes for easy naming and are commonly referred to by these names (see below). The tables are edited and updated in the following order during the nightly batch process:

1.   **DT - Descriptor Table**;

2.   **OC - Organization Control Table**;

3.   **IC - Index Code Table**;

4.   **VE - Vendor Edit Table**;

5.   **AS - Appropriation Symbol Table**;

6.   **PC - Project Control Table** (PC tables that include a Credit PA must *exclude* the table lookup until the PA record is loaded)

7.   **PA - Program Cost Account Table** (PA tables that include a PC 'lookup' must *exclude* the table lookup until the PC record is loaded); and

8.   **CA - Cost Allocation Table**.

Table Maintenance Sequence of Function Processing

There are seven table maintenance functions that can be performed on table transactions. These functions are always performed in the following order:

Delete a Funding Fiscal Year (Function **X**);

Delete (Function **D**);

Add (Function **A**);

Change (Function **C**);

Generate a Funding Fiscal Year (Function **G**);

Print a Funding Fiscal Year (Function **S**); and

Print (Function **P**)

Functions **X**, **G** and **S** apply only to tables that include **Funding Fiscal Year** (FFY) in the record key. Those tables that contain FFY are the **Appropriation Symbol, Cost Allocation, Index Code, and Program Cost Account.**

With the exception of the OC Table, which is updated at least twice during the day, and the BS Table and some labor tables which update immediately, tables are updated during the overnight system processing. If two or more table transactions are entered during the <u>same day</u> using the <u>same function and key</u> data element(s), only the last one entered updates the table. (For the OC Table, if two or more table transactions are entered during the same cycle, i.e., between updates, using the same function and key data element(s), only the last one entered updates the table.) For example, if a **Change** transaction is entered at 11:00 AM and another **Change** transaction is entered for the same table record at 2:00 PM, the 2:00 PM transaction will be used. No part of the 11:00 AM transaction is processed. The way to include the earlier change is to 'Recall Maintenance' to the screen (discussed in the next section), key or overkey with the new information, and press **Enter**. This principle and procedure also applies to **Add** transactions.

Budget Sequence Table Processing

The Budget Sequence Table is an online table and is immediately available as soon as it passes all edits. However, the Budget Sequence Table contains data elements that must be pre-defined in various Descriptor Tables. Since the Descriptor Tables are all batch posted, as described above, they must have been successfully entered no later than the previous day. If the Descriptor Table entry needed for the Budget Sequence Table entry is not present, the Budget Sequence Table entry cannot be processed.

TABLE MAINTENANCE FUNCTIONS

Online table maintenance for each table is accessed through Command **I** on CALSTARS Main Menu. Those functions authorized for access are based on the signon used. The authorized functions are either highlighted on a monochrome screen or are in a brighter color on a color screen. The available functions and 'F' keys are displayed on the screen in the following order and format:

(**A**=ADD, **C**=CHNG, **D**=DEL, **G**=GEN, **P**=PRT, **S**=PRT FFY, **X**=DEL FFY, **F5**=VIEW MASTER, **F6**=RECALL MAINT, **F10**=DEL MAINT)

Each function is described below in the order they appear on the online screen.

Add (A=ADD)

Creates a new table record. Key the letter **A** in the Function field, the appropriate values in the table control key fields and values in the informational data element fields as required or needed. A field may be left blank if it is not required. The **TAB** keys move the cursor from field to field through the screen and position it properly to enter data. After all data is recorded on the screen, the transaction can be released for processing by pressing the **Enter** key. If the transaction successfully passes all online edits, a new screen will appear with blank data fields and a message

confirming that the transaction was successfully written will show at the bottom of the screen.

If it is necessary to modify a transaction, refer to the *F6-Recall Maint* section for further instructions.

Change (C=CHNG)

Changes an existing table record. Changes <u>cannot</u> be made to the record key field(s).

<u>NOTE</u>: Some tables, such as the VE Table, require the master record be "viewed" (**F5** key) before making a change.

There are three methods for entering a **Change** transaction:

1   For accuracy and efficiency, **View** (**F5** key) the master record before entering a **Change** transaction. To enter a **Change** transaction after viewing the master record, key Function **C** and key over fields that need to be changed. Only the fields that are actually key-entered are accepted in the **Change** transaction. All other fields are merely displayed on the viewed master record screen. If a field is re-keyed with the *same* data contained in the master record, the field will be blank (as if no maintenance occurred for that field) when the transaction is viewed using **Recall Maintenance** (**F6** key).

2   No *relational* edits are performed on online **Change** transactions. A way to increase the number of online edits is to first **View** (**F5** key) the master record, assign the **Add** function, and press **Enter**. Then key the **Delete** function and enter the table control key to eliminate the obsolete record. **Delete** transactions are processed <u>before</u> **Add** transactions.

3   Key the letter **C** in the Function field, the appropriate values in the table control key fields and the new or changed values in the informational data element fields. The unaffected fields may be tabbed through (or by-passed). Entry of any letter or number in a field will take the place of the data formerly in that field. For some tables, entry of <u>a single dollar sign ($)</u> in the left-hand position of a field with no other data in that field will erase the data in that field when processing occurs. For other tables, <u>filling in the field with dollar signs</u> is required to erase the data. Refer to the *Creation and Maintenance* section for each table for the appropriate method to use. After all data is recorded on the screen, the transaction can be released for processing by pressing the **Enter** key. If the transaction successfully passes all online edits, a new screen will appear with blank data fields and a message confirming that the transaction was successfully written will show at the bottom of the screen.

If it is necessary to modify a **Change** transaction, refer to the *F6-Recall Maint* section for further instructions.

Delete (D=DEL)

Deletes an existing table record. Key the letter **D** in the Function field and the appropriate values in the table control key field(s). For **Delete** transactions, only the control key data may be entered for most tables. Other tables (with realtime update) display the record and a delete confirmation message. The informational data fields in the record must be blank. After all data is recorded on the screen, the transaction may be released for processing by pressing the **Enter** key. If the transaction successfully passes all online edits, a new screen will appear with blank data fields and a message confirming that the transaction was successfully written will show at the bottom of the screen.

Generate (G=GEN)

WARNING: **Before using the Generate function, review the *Establish New Year Tables* section of Volume 7, Chapter I.**

Generates a duplicate of the table records for the new Funding Fiscal Year (FFY). **Generate** can be used to either create a specific table entry in the new FFY or to create all entries for an entire FFY:

- ✪ To **Generate** all the table records for the entire FFY, enter only the Function **G** and the current FFY.

- ✪ To **Generate** a specific table entry, enter the Function **G** and the key of the table entry, e.g., for a CA Table, enter the current FFY, Index Code and PCA (works similar to an **Add** transaction).

Enter the Funding Fiscal Year of the existing table record(s), not the Funding Fiscal Year for the new year.

Most tables have an Active/Inactive indicator. Inactive table entries are generated into the new year as Inactive. Active table entries are generated as Active.

All generated table records are fully edited. Establishing a table through the **Generate** function is the same as creating entries through the **Add** function, **EXCEPT** a **Generate** table record will always post and the error message (if any) is a warning and is only printed once.

If tables are not created/generated in the order specified in Volume 7, Chapter I, extensive 'ZZ1-TABL POSTED W/ERROR' messages will occur. These are warning messages only and will be printed only once.

Print (P=PRT)

Prints a listing of all table records for all funding fiscal years. The listing is available for printing the following day on the agency's printer. This option is selected by keying **P** and pressing the **Enter** key. The table listing reflects the table status after all maintenance transactions have been processed. The Descriptor Table may be obtained only by requesting a listing of each of the sub-tables, by table number.

Alternatively, a print of Funding Fiscal Year (FFY) table records for a specified FFY instead of all FFYs may be requested. See S = PRT FFY, below.

Sometimes a printed copy of the data displayed on the terminal screen is sufficient. The 'Screen Print' function key(s) on the terminal is used for this purpose.

Print Specific FFY (S=PRT FFY)

Prints all the table records for a specified Funding Fiscal Year (FFY). Use Function **S** and an FFY to print the table records the next day for that FFY. Up to five FFYs may be selected for printing during each processing day. Each FFY request produces a separate listing. When Function **S** is entered successfully, the message

> 021-TRANSACTION WRITTEN…PRINT FFY
> REQUESTED   *nn, nn, nn, nn, nn*

will appear at the bottom of the screen and display the specific FFY(s), up to five, in the order they were entered. The *nn* = the FFY.

The Function **S** transaction will be rejected if the FFY was previously requested or if more than five FFY print transactions are attempted. One or more of the FFY print requests can be deleted with the **F10** key so that higher priority FFYs may be requested.

Delete Specific FFY (X=DEL FFY)

Deletes all records for the FFY specified ('global delete'). To preserve certain table records when Function **X** is used, view each record to be saved and use the **Add** function during the same day. Key Function **X** and the FFY to be deleted and press **Enter** to delete this table's records for the specified year. Function **X** transactions are processed prior to the deletion of individual table records using Function **D**. The following message will appear at the bottom of the screen and display the FFY to be deleted where *nn* occurs. The *nn* = the FFY.

> 021-TO CONFIRM DELETION, PRESS F4; OR
> PRESS F9 TO CANCEL REQUEST FOR FFY *nn*

The transaction will only be accepted by pressing the **F4** key. If the transaction successfully passes all online edits, a new screen will appear with blank data fields

and a message confirming that the transaction was successfully written will show at the bottom of the screen.

If the **F9** key is pressed, no message appears.

CAUTION: Do not delete table records that may be needed to liquidate documents.

NOTE: CALSTARS does not allow a 'global delete' of the Index Code, Appropriation Symbol , Program Cost Account or Cost Allocation tables for the **current** and the **two prior funding fiscal years**.

When Function **X** is used, a separate table maintenance activity report, CFB9*n*0-3, is produced that displays all deleted table records.

View Master Record (F5=VIEW MASTER)

Views selected table records on file. 'View Master' is accessed by keying the table control key and pressing **F5**. Records viewed with the **F5** 'View Master' key have passed all system edits and are used by CALSTARS for processing. Once the table record is displayed, the **Change** function may be used if needed. As described in the **Change** function, not all relational edits may be performed when a record is displayed through **View**, then modified and reentered using the **Change** function.

When viewing a record, a date is displayed in the upper right hand corner of the screen. This is the date of the most recent maintenance to that table record. If there is no last process date, "**NO DATE**" is displayed.

Scrolling Through Master File Records using F7 and F8 keys: Table scrolling facilitates quick location and viewing of a table record. Once the exact record is found and displayed, it may be used in a table maintenance transaction. The following tables have the capability for scrolling through master records: AS, BS, CA, DT, IC, PA, PC and VE.

The function keys **F7**-Previous Record and **F8**-Next Record may be used any time after **F5** is pressed to move to the previous/next record.

The Descriptor Table provides scrolling between all agency tables (e.g., between Table 02 and 03, etc.) and between the specific table records. A specific table number or table key is not required to scroll with the **F7** or **F8** keys. However, scrolling is more efficient if the table number and a specific record key are used.

Recall Maintenance Transaction (F6=RECALL MAINT)

Recalls a table maintenance transaction previously entered that day. A previously entered transaction may be recalled by keying the function (**X**, **D**, **A**, **C**, **G**, **S** or **P**), the table control key required for the function and pressing the F6 key. Once displayed, it may be modified and then reentered, or the maintenance transaction

may be deleted by pressing the **F10** key. (See F10 = DEL MAINT, below.) Only table maintenance transactions entered during the current processing day may be recalled.

<u>If modifying a recalled **Add** transaction:</u>

Key over, add and/or erase information on the screen and press **Enter**. The transaction will be treated as a new **Add** transaction and will have to pass all online edits. If the transaction successfully passes all online edits, a new screen appears with blank data fields and a message at the bottom of the screen confirms that the transaction was successfully written.

<u>If modifying a recalled **Change** transaction:</u>

Key over, insert and/or erase information on the screen and press **Enter**. The transaction will be treated as a new **Change** transaction and will have to pass the same online edits as the original **Change** transaction. If the transaction successfully passes all online edits, this new record over-writes the old record, a new screen appears with blank data fields and a message at the bottom of the screen confirms that the transaction was successfully written.

<u>Scrolling Through Table Maintenance Transactions:</u> Table scrolling assists in quickly locating a record within a table record and viewing it on the screen. Once the exact record is found and displayed, it may be used in a table maintenance transaction. The following tables have the capability for scrolling through table maintenance records: AS, CA, DT, IC, PA, PC and VE.

The table maintenance records within each table are sorted first by function (**X**, **D**, **A**, **C**, **G**, **S** and then **P**), and within each function, they are sorted in alphanumeric ascending order).

F7-Previous Record and **F8**-Next Record may be used any time after **F6** is pressed (a valid function must be keyed before pressing a scroll key) to move to the previous/next maintenance record. If a function has been keyed, the **F7** and **F8** keys may be used to scroll maintenance records without first viewing (**F6**) a maintenance record.

The Descriptor Table provides scrolling between all agency tables (e.g., between Table 02 and 03, etc.) and between the specific table records. A specific table number or table key is not required to scroll with the **F7** or **F8** keys. However, scrolling is more efficient if the table number and a specific record key are used.

Delete Maintenance Transaction (F10=DEL MAINT)

Deletes any maintenance transaction that was entered since the last table maintenance update. No record will exist on a shadow file or in any transaction report. A guide to using the **F10** key is displayed in the table below.

To delete a maintenance transaction, enter the function and the Table Key (if required) as shown below; then press **F10**:

Table	Table Key:		
	Functions A, C, D & G	Functions G & S	Function P
Appropriation Symbol	FFY and AS	FFY	Blank
Cost Allocation	FFY, IC, and PCA	FFY	Blank
Index Code	FFY and IC	FFY	Blank
Program Cost Account	FFY and PCA	FFY	Blank

GENERAL TABLE ENTRY PROCEDURES

Many of the table maintenance procedures and processing requirements are standard for all CALSTARS tables. The actual input screen for each table is arranged similar to the corresponding input form.

Coding and Entering Year Fields

Many of the tables contain date or year fields, such as, Funding Fiscal Year (FFY) and start and end dates. Year values are maintained in the system files in 4-digit format, however, some year fields require a two digit year code for input and inquiry on the online screens. The 2-digit year codes used on the screens are translated to 4-digit year codes as follows: 2-digit year codes **00** through **20** are appended with the century code **20**; and, 2-digit year codes **21** through **99** are appended with the century code **19**. For example, to establish an Appropriation Symbol (AS) table record for Funding Fiscal Year (FFY) 2000, code **00** would be entered in the FFY field on the AS table screen. If the appropriation in this example reverts on 6/30/2005, the REVERSION DATE field on the AS table screen (in the *MMDDYYYY* format) would be entered as **06302005**. However, the START DATE and END DATE fields in the PC Table are in the *MMDDYY* format. This same date would be entered as **063005**.

Screen Access and Maintenance Functions

The Table Maintenance Inquiry screens are accessed through Main Menu Code **I**-Table Maintenance/Inquiry.

Table Data Entry Procedures

The table data entry process for table maintenance transactions requires five steps:

✪ Access the appropriate table from the Table Maintenance/Inquiry submenu;
✪ Enter the desired maintenance function (A, C, D, etc.);
✪ Enter the table control key; and
✪ Enter the informational elements, if required, and
✪ Press the **Enter** key.

The table maintenance transaction is submitted for online editing and saved for later processing by depressing the **Enter** key. If the transaction passes the data entry online edits, it is stored for overnight processing, a new screen appears with blank data fields and a message at the bottom of the screen confirms that the transaction was successfully written.

Maintenance transactions found to be in error are not stored for overnight processing but are displayed on the screen with the appropriate error message. See "Error Detection and Correction", below.   A transaction stored for processing may be modified any number of times by use of the 'F6-RECALL MAINT' function. Every time the **Enter** key is pressed, the modified transaction will be subjected to the online data edits.

When a rewritten transaction passes all online edits, a new screen appears with blank data fields and a message at the bottom of the screen confirms that the transaction was successfully written.

Error Detection and Correction

After the **Enter** key has been pressed to release the transaction to CALSTARS, several online edits are performed. Up to three error messages can be displayed at the bottom of the data entry screen and the fields containing errors are highlighted on the screen. Each error message consists of a three-character error code and an abbreviated English language description of the error. The error codes generated by the online table maintenance data entry process are defined in Volume 4.

Except for the BS Table (which is fully edited and then updated online at the time of entry), a complete edit of the input table maintenance transactions is <u>not</u> performed at the time of data entry. All other table maintenance transactions are fully edited during nightly system table edit and update processing. These more detailed 'batch' edits perform inter-table and intra-table coding validations. Transactions that pass the data entry (online edit) process may subsequently fail an edit during the actual updating (batch edit) of the CALSTARS tables.

These errors are printed on the Table Maintenance Edit Activity reports, which are automatically produced at the conclusion of each update (overnight) cycle. The error codes and messages are defined in Volume 4.

Errors detected online during data entry should be corrected immediately. The field(s) in error should be corrected and the maintenance transaction re-entered by pressing the **Enter** key. If a maintenance transaction cannot be corrected on the screen, then it can be erased by pressing the **F9** key.

Other Considerations

Two transactions with the same control key may be entered accidentally. This may occur, for example, when there is some interruption in the data entry activity immediately after a transaction was entered and the same transaction is entered

again when the data entry activity resumes. When CALSTARS detects a duplicate table key, it over-writes the first transaction with the second transaction. In this situation, the screen will show that the table maintenance transaction has been 'Changed' rather 'Written'.

If a maintenance transaction is accidentally re-entered, check it carefully for function and data validity.

Pressing the **F12** key rather than the **Enter** key returns to the Main Menu without entering or saving the transaction.

Batch Edit Functions

All table maintenance errors (except **G**-Generated table transactions) detected through the nightly system update process are classified as 'Fatal'. **Add** transactions with fatal errors are never accepted as a part of a table list. No record is kept beyond the one-time printing of the table transaction activity report with the error message(s). The only provision for 'correcting' an erroneous table transaction is to completely re-key it. When a **Change** or **Delete** transaction fails the batch edit, the record being changed or deleted remains the same as it was prior to performing table maintenance.

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